

REMARKS

Claims 18-38 are pending in the application, of which Claims 18, 21, 26, 28, and 31 are independent. Claims have been rejected under 35 U.S.C. 103(a). Applicants respectfully traverse the rejections and request reconsideration.

Claim Amendments

Applicants are cancelling dependent Claims 19 and 32 and are incorporating the subject matter of those claims into independent Claims 18 and 31, respectively. Accordingly, Applicants are also amending the dependencies of Claims 24, 25, 37, and 38 due to the cancellation of Claims 19 and 32.

Applicants are also amending independent Claim 21 to include subject matter similar to now-amended independent Claims 18 and 31.

Upon entry of these amendments, Claims 18, 20-31, and 33-38 will be pending in this application, of which Claims 18, 21, 26, 28, and 31 are independent.

Rejections Under 35 U.S.C. 103(a)

Claims 18, 19, 22-26, 29-32, and 34-38 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Gruber *et al.* (U.S. Patent No. 6,563,795 hereinafter “Gruber”) in view of Tsutsui (U.S. Patent No. 5,150,356).

Claims 21 and 28 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Gruber in view of Huey *et al.* (U.S. Patent No. 5,467,349, hereinafter “Huey”).

Claims 20, 27, and 33 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Gruber in view of Tsutsui and further in view of Cappellari *et al.* (U.S. Patent No. 5,557,611, hereinafter “Cappellari”).

Gruber describes a method of tracing nodes along a route by sending a trace cell downstream of a monitoring node. A downstream node may then send a trace cell back in the upstream direction identifying itself to the monitoring node. *See* Gruber, col. 4, lines 7-65. Gruber may send a trace cell for each downstream node, each trace cell originating from the monitoring node, “Node A” in Gruber (*see* Gruber, col. 4, lines 10-35). Alternatively, Gruber

may send only one trace cell, originating from Node A, the monitoring node, and each downstream node may then send a trace cell back in the upstream direction (*see* Gruber, col. 4, lines 49-65).

The Office acknowledges that Gruber does not disclose originating a call “*in a given direction around the virtual path*” and monitoring for that same call “*to arrive at the source element in the [same] given direction around the virtual path,*” as recited, for example, by independent Claim 18. However, the Office asserts that it would be obvious to modify Gruber with a unidirectional ring (as shown in Fig. 3a of Tsutsui) “to allow OAM cells to travel back to the source node.”

While respectfully maintaining that there would not have been a motivation for the Office’s proposed combination of references at the time of the invention, Applicants seek to expedite prosecution by amending independent Claims 18, 21, and 31 to recite originating Operations, Administrative and Maintenance (OAM) calls at both a source and intermediate network elements and monitoring for both the OAM calls at the source network element. For example, independent Claim 18 recites as amended “*originating a second at least one of operations, administrative and maintenance calls at an intermediate network element on the virtual path in the given direction around the virtual path*” and “*monitoring for the second at least one of operations, administrative and maintenance calls at the source network element on the virtual path to arrive at the source element in the given direction around the virtual path*” (emphasis added).

In Gruber, the original trace cell is sent from its monitoring node (Node A). It does not originate from other nodes. The Office cites, on page 3 of the most-recent Office Action, col. 4, lines 24-25 and 53-65 of Gruber as disclosing this claimed functionality with respect to now-cancelled Claims 19 and 32, but as presented above, that portion of Gruber discloses that the original trace cell is sent only from the monitoring node. Gruber’s downstream nodes may send trace cells back to the monitoring node, but those trace cells travel in the opposite direction and, thus, do not apply to the claims as recited. Accordingly, even if Gruber were arranged in a ring, and even if its original trace cell would be looped around the ring from its monitoring node and back to its monitoring node (as proposed by the Office), the Gruber does not teach or suggest originating a second trace cell from another node and in the same direction around the ring.

Cited reference Tsutsui has been cited as disclosing a ring configuration, but Tsutsui also does not go as far as to teach originating OAM calls at both a source and intermediate network elements and monitoring for both the OAM calls at the source network element. The Office refers to Tsutsui's Fig. 3a in stating that Tsutsui's network configuration is such that a cell from a source node is able to travel back to the source node. But Tsutsui does not actually disclose such a path in any of its networks shown in Figs. 3a-3d. None of the network configurations illustrated in any of Figs. 3a-3d show a path from a source node back to the source node. Thus, Tsutsui cannot teach originating OAM calls at both a source and intermediate network elements and monitoring for both the OAM calls at the source network element.

Cited reference Huey has been cited as disclosing a unidirectional virtual path, but the path is not disclosed as being in a ring configuration. An OAM call sent from a given ATM switch of Huey is not be received by the same ATM switch. Thus, Huey does not teach originating OAM calls at both a source and intermediate network elements and monitoring for both the OAM calls at the source network element. Cited reference Cappellari has been cited for disclosing statistical multiplexing, and is concerned primarily with passing cells through a connection network. Cappellari does not teach originating OAM calls at both a source and intermediate network elements and monitoring for both the OAM calls at the source network element. Thus, even in combination, the cited art does not teach or suggest the subject matter of independent Claims 18, 21, and 31 as now amended. Therefore, Applicants respectfully submit that independent Claims 18, 21, and 31 are novel and nonobvious over the cited art.

Without amendments, Independent Claims 26 and 28 already recited originating an OAM call at an intermediate network element and monitoring for the call at a source network element, which, as presented above, is not taught or suggested by the cited art. Therefore, Applicants respectfully submit that independent Claims 26 and 28 are novel and nonobvious over the cited art.

Dependent Claims 20, 22-25, 27, 29, 30, and 33-38 each depend from one of the above-mentioned independent claims. Thus, Applicants respectfully submit that those claims are novel and nonobvious over the cited art for at least the same reasons.

Therefore, Applicants respectfully request that the rejections under 35 U.S.C. 103(a) be withdrawn and that Claims 18, 20-31, and 33-38 be allowed.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims pending upon entry of this Amendment (Claims 18, 20-31, and 33-38) are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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